

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Serial No.** 09/742,660      **Conf. No.** 6984  
**In Re Application of:** Nishikawa      **Art Unit:** 3628  
**Filed:** 12/21/2000      **Dkt. #:** JP919990205US1 (IBMC-0037)  
**Title:** DATABASE PROCESSING SYSTEM  
FOR CHARGE CALCULATIONS      **Examiner:** Nelson, Freda Ann

Mail Stop Appeal Brief- Patents  
Commissioner for Patents  
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**BRIEF OF APPELLANTS**

This is an appeal from the Final Rejection (Office Action) dated November 16, 2006, rejecting claims 1-6. The requisite fee set forth in 37 C.F.R. §1.17 (c) has been submitted on February 19, 2007.

**REAL PARTY IN INTEREST**

International Business Machines Corporation is the real party in interest.

**RELATED APPEALS AND INTERFERENCES**

There is no related appeal or interference.

**STATUS OF CLAIMS**

As filed, this case included claims 1-6. Claims 1-6 remain pending, stand rejected, and form the basis of this appeal. No claim has been allowed. The rejections of claims 1-6 are being appealed.

## **STATUS OF AMENDMENTS**

After-final amendments to claims 1-2 and 4 were proposed following the Final Rejection of November 16, 2006. The after-final amendments were not entered as they allegedly raise new matter.

## **SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claim 1 provides a data processing system (FIG. 1, 101+102+103+104) for calculating charges to customers, comprising: a database (103), for managing customer data required (page 9, lines 7-9) for calculating said charges to customers; rule management means (102), for storing rule sets (page 9, lines 17-25) that, in advance, each define only one charge calculation method that is employed in accordance with a type of customer service that is rendered (*see, e.g.*, FIG. 4; *see also, e.g.*, page 9, lines 3-6), wherein the charge calculation method includes at least one rule based instruction (page 9, lines 20-23) for calculating a discount, wherein said at least one rule based instruction references a discount table (104) that includes a discount threshold value (page 13, lines 20-22); and calculation means (101), which, for each different type of customer service provided to a customer, identifies the rule set associated with the type of customer service, and calculates charges for each event belonging to the type of customer service based on the associated rule set, in accordance with the contents of said customer data read from said database (*see, e.g.*, FIG. 4).

Independent claim 2 provides a data processing system (FIG. 1, 101+102+103+104) for calculating charges to customers, comprising: a database (103), for managing customer data (page 9, lines 7-9) required for calculating said charges to customers; rule management means (102), for storing a rule (page 9, lines 17-25) that, in advance, defines only one charge calculation method that is employed in accordance with the type of customer service that is rendered (*see, e.g.*, FIG. 4; *see also, e.g.*, page 9, lines 3-6); a discount table (104), which is described in said rule that defines a charge calculation method, for storing a charge discount ratio that is employed for said charge calculation in accordance with the type of customer service that is rendered (page 13, lines 20-22), wherein the discount table further includes a set of change point identifiers and associated discount threshold values (*see, id.*); and calculation means (101), for, in accordance with the contents of said customer data read from said database, obtaining for a pertinent customer, from said rule management means, said rule that defines a charge calculation method, and for calculating a charge by referring to said charge discount ratio defined in said pertinent rule (*see, e.g.*, FIG. 4).

Independent claim 4 provides a method for calculating charges to customers using a data processing computer system, comprising: associating a set of rules one-to-one with each service type provided by a service provider (*see, e.g.*, FIG. 4); providing a database (103) of customer data, wherein the customer data includes events, and wherein each event belongs to a service type utilized by a customer (page 9, lines 3-11); identifying the events belonging to a predetermined customer (*see, e.g., id.*); analyzing the events to determine what service types were utilized by the predetermined customer (*id.*); and for each service type utilized by the predetermined customer, processing the events belonging to the service type by applying the associated set of rules for the service type (*see, e.g.*, FIG. 4; *see also, e.g.*, page 9, lines 3-6).

## **GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 4-5 are anticipated under 35 U.S.C. 102(b) by Reeder, US 5,852,812.
2. Whether claim 1 is unpatentable under 35 USC 103(a) over Boardman et al., US 6,456,986 (“Boardman”) in view of Rubin et al., US 6,078,897 (“Rubin”).
3. Whether claims 2-3 are unpatentable under 35 USC 103(a) over Boardman in view of Carter, US 6,553,350, in further view of Rubin.
4. Whether claim 6 is unpatentable under 35 USC 103(a) over Reeder in view of Boardman.

## **ARGUMENT**

1. Claims 4-5 are not anticipated by Reeder  
Reeder does not disclose, *inter alia*, “associating a set of rules one-to-one with each service type provided by a service provider[.]” (Claim 4). Reeder discloses determining a price rule. (Col. 15, lines 33-34). However, in Reeder, the price rule is determined based on the service ID, event ID and the customer profile. (Col. 15, lines 30-31; see also col. 15, lines 52-53, “[I]ook up surcharge pricing rule and discount pricing rule based on event id, service id, currency and subscription plan.”) As such, in Reeder, the price rule is determined based on many factors, including event id, service id, currency and subscription plan. Reeder does not associate a service type one-to-one with a pricing rule, i.e., not one-to-one relationship between service type and pricing rule. In sharp contrast, the claimed invention includes, *inter alia*, “associating a set

of rules one-to-one with each service type provided by a service provider[.]” In view of the foregoing, Reeder does not anticipate the claimed invention.

In the Office Action, the Examiner asserts that col. 18, lines 5-7 of Reeder discloses associating a set of rules one-to-one with each service type. (Office Action at page 2). Appellant respectfully disagrees. Careful reading of the cited disclosure of Reeder reveals that it only provides the details of an exemplary pricing rule. The cited part of Reeder, however, does not disclose a one-to-one association between the exemplary pricing rule and a service type. In addition, the cited disclosure of Reeder (col. 18, lines 5-7) relates a pricing rule with an event ID, but not a service type. For example, in Reeder, “[t]he CPipeClosedEvent object is produced when the connection between the server 12 and application server 100 is disrupted.” (Col. 9, lines 26-28). Such a connection disruption event is clearly not a service type. In view of the foregoing, Reeder does not anticipate the claimed invention. Accordingly, Appellant respectfully requests reversal of the final rejection.

In the Office Action, the Examiner also asserts that the current specification does not exclude factors other than a service type. (See Office Action at page 2). Appellant respectfully disagrees as claim 4 recites “associating a set of rules one-to-one with each service type[.]” That is, other factors may not be considered in establishing the one-to-one association between a service type and a rule set. As such, Reeder does not disclose the above feature of claim 1.

Claim 5 is believed allowable for the same reasons, as well as for its own claim features.

2. Claim 1 is not obvious over Boardman in view of Rubin

Boardman and/or Rubin do not teach or suggest, *inter alia*, “rule sets that, in advance, each define only one charge calculation method that is employed in accordance with a type of

customer service[.]” Within a rule set of Boardman, the selection of an algorithm is based on many factors (conditions) following a tree structure. That is, a price plan of Boardman does not “define only one charge calculation method[.]” (Claim 1 of the claimed invention). Rather, within a price plan of Boardman, there are many algorithms to be further selected. In view of the foregoing, contrary to the Office’s assertion, Boardman does not disclose or suggest, “each [rule set] define[s] only one charge calculation method that is employed in accordance with a type of customer service[.]” (Claim 1 of the claimed invention).

In the Office Action, the Examiner asserts that “Boardman discloses ‘a Price Plan may consist of several Algorithms, each one used to rate different types of Events[.]’” (Office Action at page 3, inner citation omitted, emphasis original). Appellant submits that this assertion illustrates deficiencies of Boardman. The Examiner does not expressly state which one of the price plan and the algorithm of Boardman is used to disclose or suggest the claimed rule set, so Appellant will discuss herein the deficiencies of both. The price plan of Boardman does not teach the claimed rule set because it does not define only one charge calculation method as discussed in the above paragraph. The algorithm of Boardman also does not teach the claimed rule set because the algorithm is not “employed in accordance with a type of customer service[.]” In Boardman, conditions are used to select an algorithm (*see, e.g.,* FIG. 2, *see also, e.g.,* col. 4, lines 4-16 for examples of conditions) such that an algorithm is not employed in accordance with a type of service. Rubin does not overcome, *inter alia*, this deficiency of Boardman.

In view of the foregoing, the suggested combination of the cited references does not disclose or suggest each and every claimed feature. Accordingly, Appellant respectfully requests reversal of the final rejection.

3. Claims 2-3 are not obvious over Boardman, Carter, and Rubin

The arguments regarding claim 1 also apply to claims 2-3. Appellant submits that Carter does not overcome, *inter alia*, the above discussed deficiencies of Boardman and Rubin. In view of the foregoing, the suggested combination of the cited references does not disclose or suggest each and every claimed feature. Accordingly, Appellant respectfully requests reversal of the final rejection.

4. Claim 6 is not obvious over Reeder in view of Boardman.

The arguments regarding claims 4-5 also apply to claim 6. Appellant submits that Boardman does not overcome, *inter alia*, the above discussed deficiencies of Reeder. In view of the foregoing, the suggested combination of the cited references does not disclose or suggest each and every claimed feature. Accordingly, Appellant respectfully requests reversal of the final rejection.

In view of the foregoing, Appellant submits that the final rejection is defective, and should be reversed.

Respectfully submitted,

/Michael F. Hoffman/

Dated: 04/19/07

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## **CLAIMS APPENDIX**

1. A data processing system for calculating charges to customers, comprising:

a database, for managing customer data required for calculating said charges to customers;

rule management means, for storing rule sets that, in advance, each define only one charge calculation method that is employed in accordance with a type of customer service that is rendered, wherein the charge calculation method includes at least one rule based instruction for calculating a discount, wherein said at least one rule based instruction references a discount table that includes a discount threshold value; and

calculation means, which, for each different type of customer service provided to a customer, identifies the rule set associated with the type of customer service, and calculates charges for each event belonging to the type of customer service based on the associated rule set, in accordance with the contents of said customer data read from said database.

2. A data processing system for calculating charges to customers, comprising:

a database, for managing customer data required for calculating said charges to customers;

rule management means, for storing a rule that, in advance, defines only one charge calculation method that is employed in accordance with the type of customer service that is rendered;

a discount table, which is described in said rule that defines a charge calculation method, for storing a charge discount ratio that is employed for said charge calculation in accordance with the type of customer service that is rendered, wherein the discount table further includes a set of change point identifiers and associated discount threshold values; and

calculation means, for, in accordance with the contents of said customer data read from said database, obtaining for a pertinent customer, from said rule management means, said rule that defines a charge calculation method, and for calculating a charge by referring to said charge discount ratio defined in said pertinent rule.

3. The data processing system of claim 2, wherein the rule further defines a desired change point identifier.

4. A method for calculating charges to customers using a data processing computer system, comprising:

associating a set of rules one-to-one with each service type provided by a service provider;

providing a database of customer data, wherein the customer data includes events, and wherein each event belongs to a service type utilized by a customer;

identifying the events belonging to a predetermined customer;

analyzing the events to determine what service types were utilized by the predetermined customer; and

for each service type utilized by the predetermined customer, processing the events belonging to the service type by applying the associated set of rules for the service type.

5. The method of claim 4, wherein the set of rules associated with each service type includes a discount condition rule and a discount calculation rule.

6. The method of claim 5, wherein the set of rules associated with each service type further includes a charge calculation rule.

## **EVIDENCE APPENDIX**

There is no evidence submitted.

## **RELATED PROCEEDINGS APPENDIX**

There is no related proceeding.

## **CERTIFICATE OF SERVICES**

There is no other party to this appeal proceeding.